



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2021-0335; Project Identifier MCAI-2020-01665-R;
Amendment 39-21632; AD 2021-14-05]**

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters Deutschland GmbH Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Helicopters Deutschland GmbH Model MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters. This AD was prompted by a report of sudden severe vibrations and a cracked open blade trailing edge caused by a loosened lead inner weight. This AD requires inspections to determine if any bolted main rotor blades are installed, and replacement of the affected main rotor blades. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, 2701 N Forum Drive, Grand Prairie, TX 75052; phone: 972-641-0000 or 800-232-0323; fax: 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. Service information that is incorporated by reference is also available at <https://www.regulations.gov> by searching for and locating Docket No.

FAA-2021-0335.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0335; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the Luftfahrt-Bundesamt AD, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kathleen Arrigotti, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3218; email: kathleen.arrigotti@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Helicopters Deutschland GmbH Model MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters. The NPRM published in the *Federal Register* on April 26, 2021 (86 FR 21965). In the NPRM, the FAA proposed to require inspections to determine if any bolted main rotor blades are installed, and replacement of the affected main rotor blades. The NPRM was prompted by a report of sudden severe vibrations and a cracked open blade trailing edge caused by a loosened lead inner weight.

German AD D-2005-115, effective March 15, 2005 (German AD D-2005-115), issued by Luftfahrt-Bundesamt, which is the aviation authority for Germany, was issued to correct an unsafe condition for Eurocopter Deutschland (now Airbus Helicopters Deutschland GmbH) Model MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters. Luftfahrt-Bundesamt advises that during the flight of a BK117 severe vibrations suddenly

occurred, stemming from a cracked open blade trailing edge, which was traced to a loosened lead inner weight bolt. Additional inspection revealed extreme cavities of the lead weight resulting from the bolting process, which was performed as a repair for main rotor blades with bulging in the area of the lead inner weights. This condition, if not addressed, could result in loss of control of the helicopter.

Accordingly, German AD D-2005-115 requires an inspection and log card review to determine if any bolted main rotor blades are installed, and replacement of the affected main rotor blades.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These helicopters have been approved by the aviation authority of Germany and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with Germany (now a member of the European Union), Luftfahrt-Bundesamt, its technical representative, has notified the FAA of the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Eurocopter Alert Service Bulletin No. ASB-MBB-BK117-10-125, dated February 14, 2005. This service information specifies procedures for an inspection (for cracking of the paint) and log card review (for a certain entry or equivalent) to determine if any bolted main rotor blades (i.e., main rotor blades with bolted lead inner weights) are installed, and replacement of the affected main rotor blades.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the

ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 44 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
3 work-hours X \$85 per hour = \$255	\$0	\$255	\$11,220

The FAA estimates the following costs to do any necessary on-condition replacements that would be required based on the results of any required actions. The FAA has no way of determining the number of helicopters that might need these on-condition replacements:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
Up to 20 work-hours X \$85 per hour = \$1,700 per blade (up to 4 blades)	Up to \$23,100 per blade (up to 4 blades)	Up to \$24,800 per blade (up to 4 blades)

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-14-05 Airbus Helicopters Deutschland GmbH: Amendment 39-21632; Docket No. FAA-2021-0335; Project Identifier MCAI-2020-01665-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Airbus Helicopters Deutschland GmbH Model MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6210, Main Rotor Blades.

(e) Unsafe Condition

This AD was prompted by a report of sudden severe vibrations and a cracked open blade trailing edge caused by a loosened lead inner weight. The FAA is issuing this AD to address bolted lead inner weights of the main rotor blade, which could loosen and cause cracking of the open blade trailing edge. The unsafe condition, if not addressed, could result in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within 30 days after the effective date of this AD, review the log card (or equivalent record) and visually inspect each main rotor blade to determine if any bolted main rotor blades (i.e., main rotor blade with bolted lead inner weight) are installed in accordance with paragraphs 2.A.1., 2.B.1., 2.B.2., and 2.B.3. of the Accomplishment Instructions of Eurocopter Alert Service Bulletin No. ASB-MBB-BK117-10-125, dated February 14, 2005. If during the review, the total hours time-in-service (TIS) cannot be positively determined, this AD requires treating that part as having accumulated more than 3,000 total hours TIS. If any bolted main rotor blade (i.e., main rotor blade with bolted lead inner weight) is installed, replace the main rotor blade in accordance with paragraph 2.B.4. of the Accomplishment Instructions of Eurocopter Alert Service Bulletin ASB-MBB-BK117-10-125, dated February 14, 2005, as follows:

(1) For a bolted main rotor blade that has accumulated less than 2,300 total hours TIS on the blade since bolting of the lead inner weight as of the effective date of this AD: Before accumulating 2,500 total hours TIS on the blade since bolting of the lead inner weights.

(2) For a bolted main rotor blade that has accumulated 2,300 total hours TIS up to 3,000 total hours TIS inclusive, on the blade since bolting of the lead inner weight as of the effective date of this AD: Within 200 hours TIS after the effective date of this AD.

(3) For a bolted main rotor blade that has accumulated more than 3,000 total hours TIS on the blade since bolting of the lead inner weight as of the effective date of this AD: Within 50 hours TIS after the effective date of this AD.

(h) Contacting the Manufacturer to Determine TIS

Where Eurocopter Alert Service Bulletin ASB-MBB-BK117-10-125, dated February 14, 2005, specifies to send a form to the manufacturer to determine TIS since bolting, this AD does not include that requirement.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Kathleen Arrigotti, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3218; email: kathleen.arrigotti@faa.gov.

(2) The subject of this AD is addressed in Luftfahrt-Bundesamt German AD D-2005-115, effective March 15, 2005. You may view the Luftfahrt-Bundesamt German AD at <https://www.regulations.gov> in Docket No. FAA-2021-0335.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Eurocopter Alert Service Bulletin No. ASB-MBB-BK117-10-125, dated February 14, 2005.

(ii) [Reserved]

(3) For service information identified in this AD, contact Airbus Helicopters, 2701 N Forum Drive, Grand Prairie, TX 75052; phone: 972-641-0000 or 800-232-0323; fax: 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 8, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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